EPA's Radiation Protection Standards

United States Environmental Protection Agency

About Regulations and Standards

EPA's mission is to protect human health and the environment. As part of this mission, EPA writes regulations that explain the technical, operational and legal details necessary to implement Federal environmental laws. Regulations are mandatory requirements that can apply to individuals, businesses, states, local governments or other institutions. Many environmental regulations set standards that limit the amount of a hazardous material allowed in the environment.

Protecting the Environment from Man's Use of Radioactivity

In 1970, Congress gave EPA the responsibility for establishing generally applicable standards for the protection of human health and the environment from radioactive materials. EPA scientists assess the human health risks from exposure to radioactive substances. EPA then uses this knowledge to set protective limits on the radioactivity in soil, water and air that comes from man's use of radioactive elements such as uranium. These radioactive elements emit ionizing radiation, which can damage living issue and cause cancer. EPA does not regulate naturally occurring radiation or the non-ionizing radiation that is emitted by electrical devices such as cell phones.

Standards for Specific Types of Facilities

Radioactive contaminants could enter the environment from a variety of sources, so EPA has issued regulations that cover specific types of materials and facilities that could pose significant risks to the public.

- **Nuclear Power Operations:** "Environmental Radiation Protection Standards for Nuclear Power Operations" (40 CFR 190) limit the radiation releases and doses to the public from the normal operation of nuclear power plants. The standards apply to facilities involved in the milling, conversion, fabrication, use and processing of uranium fuel for generating electrical power.

- **Spent Fuel, High Level, and Transuranic Wastes:** "Management and Storage of Spent Fuel, High Level and Transuranic Wastes" (40 CFR 191) sets dose standards for public protection from the radiation from spent fuel, high-level wastes and wastes that contain elements with atomic numbers higher than uranium (transuranic wastes). The standards apply to the management, storage and disposal of spent fuels, and include provisions to protect groundwater from radioactive contamination.

- **Uranium Mill Wastes:** "Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings" (40 CFR 192) set dose and emission limits for the protection of public health and the environment from the radiological and chemical hazards associated with uranium and thorium ore processing, including their associated wastes.

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• **Air Emissions:** "Radiological National Emissions Standards for Hazardous Air Pollutants (NESHAPS)" (40 CFR 61) set limits for airborne radiological emissions from specific activities and facilities. For example, Subpart H of the standards applies to releases from DOE facilities. Subpart W limits radon emissions from tailings at operating uranium mills.

EPA's Role at Nuclear Facilities

EPA's mission is to protect human health and natural resources from pollution. The Agency sets limits on the amount of radioactivity that can be released into the environment. EPA does not regulate the daily operations of nuclear power plants or nuclear fuel facilities, and is neither a proponent nor an opponent of nuclear energy. The Nuclear Regulatory Commission (NRC) has regulatory responsibility for licensing and operation of nuclear power plants and other commercial facilities that use radioactive materials. NRC implements EPA standards at applicable facilities. In addition, NRC must assess the environmental impacts of any new nuclear power plants, and submit an Environmental Impact Statement (EIS) to EPA for review.

Other Regulatory Agencies

U.S. Nuclear Regulatory Commission (NRC)—The NRC regulates the civilian uses of nuclear materials in the United States by licensing facilities that possess, use, or dispose of nuclear materials; establishing standards; and inspecting licensed facilities.

U.S. Department of Energy (DOE)—DOE is responsible for the development of the disposal system for spent nuclear fuel from the nation's nuclear power plants. DOE is also responsible for the management and disposal of nuclear waste and other radioactive materials associated with nuclear weapons production at federally-owned facilities.

U.S. Department of Transportation (DOT)—DOT, in cooperation with Nuclear Regulatory Commission and the states, governs the packaging and transport of radioactive materials.

States—Most states have agencies responsible for regulating the use of radiation and radioactive emissions. Some states operate under agreement with the NRC to license and regulate certain types of radioactive materials.

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